

DEC 17 1951

UNITED STATES DEPARTMENT OF AGRICULTURE
 AGRICULTURAL RESEARCH ADMINISTRATION
 BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
 Sanibel, Florida

December 14, 1951

To: R.C. Bushland, Entomologist In Charge

From: Alfred H. Baumhover

Subject: Progress Report 12/8-14/51

Emergence began Dec 5.

Following is a tabulation of the number and nature of C. americana egg masses observed during the week:

Date	<u>12/8</u>	<u>9</u>	<u>10</u>	<u>11</u> *	<u>12</u>	<u>13</u>	<u>14</u>
Weather	83	88	90	90	74	78	82
in F.	72	68	70	70	64	58	62
Egg masses							
Pen 1	1				S NR	S NR	F R
					F R		F NR
Pen 2			1				
Pen 3		2	6		F NR		F NR
							F NR

 *Monitoring begun to detect radioactive egg masses. The 2 masses listed as radioactive counted 220 and 270 cpm.

S NR equals sterile, non-radioactive
 F NR equals fertile, non-radioactive
 S R equals sterile, radioactive
 F R equals fertile, radioactive

After replacing a buffer condenser in the power supply of the counter and adjusting the distance between the nearest point of the GM tube and the most distant point of the fly to 12 mm. an average cpm of 2340 was obtained from 5 late-emerging flies 8 days after emergence (flies were dead shortly after emergence.) I trust this will check more closely with the planned rate of radioactivity than the cpm mentioned in last week's report.

Fly catches made with liver-baited standard traps are summarized in the following table:

TRAP	School		Junction		St. James	Pt. Rassa		Estero		Captiva	
DATE SET	11/29		11/30		11/29	11/29		11/30		12/4	
DATE OF COLLECTION	12/9	12	12/9	12	12/7	--	12/5	13	12/5	13	12/12
SIZE IN CC.	175	350	4	13	26		60	550	14	750	350

SPECIES IN PERCENT

	School		Junction		St. James	Pt. Rassa		Estero		Captiva
C. macellaria	60	83*	5	2*	20	78	90*	39	70*	80
C. americana	0	0	0	0	0	0	0	0	0	
Otitidae sp.	6				1			5		
Synthesiomyia sp.	24		85			9				
(small, misc.)	6		10	40	16	1	0	0	0	
Lucilia sp.	3		0		0	0		1		
Sarcophagidae sp.	1	14	0	58	63	12	10	55	30	20

* Preliminary estimate.

One radioactive C. americana was recovered from the School trap 12/12/51.

In regard to your letter December 6 relating to movement of traps from wind-swept locations, Pt. Rassa and Estero have collected 550 and 750 cc. of flies in 8 days. However, we will seek more favorable locations after conferring with Mr. Eddy. We have not found time to service the St. James trap for the second time, but we will shortly.

C. macellaria have been very abundant at times at several of the goat pens, with several hundred being observed resting on the fence and feeding on the wounds, but a secondary infestation of C. macellaria was observed in only 1 wound.

Although we have been collecting sufficient C. americana egg masses for infesting the goats a cold spell would leave us without a supply. Since it appears that the flies will live only about 2 weeks under our lab conditions can you send us 400 to 500 pupae every two weeks.

Alfred H. Baumhover

cc: G.W. Eddy

UNITED STATES DEPARTMENT OF AGRICULTURE
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DEC 10 1951

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

Sanibel, Florida

12/8/51

To: R.C. Bushland, In Charge

From: A.H. Baumhover, In Sanibel

Subject: Weekly Progress Report-Sanibel Project

C. americana activity increased considerably at Eddy Pen during the week. Eight egg masses were observed on 3 different goats at this pen located at the northwest tip of Sanibel. It is only 1 mile south of Buck Key, which we have recently heard has a herd of hogs frequently infested with screw worms.

Twenty-five hundred sterile and 500 normal screw worms were released Wednesday afternoon at each pen per your instructions. To date emergence from the normal flies is 63% and from the sterilized flies is 51%. At the time of release from 15 to 30% of the flies in the carton had already emerged. This necessitated counting out the emerged flies before distributing the flies among the three pens. Would it be possible to have the complete complement of pupae for each pen in separate cartons?

Two egg masses were used to infest a rabbit, however the animal died within two days and the larvae failed to develop. Skipper is still confident that he will be able to pick up infestations on the mainland, which at this stage would undoubtedly be more desirable in view of the release of Kerrville screw worms on the island, both planned and accidental.

Fly traps on the island were checked before the release of radioactive flies but only 3 to 5 flies were present. Traps on the outlying points did somewhat better with Punta Rassa containing the biggest catch, 30 cc., primarily macellaria.

The Geiger Counter and extra tube have arrived, apparently in good condition. Our readings indicate a count of from 1500 to 1800 counts on the flies shortly after emergence.

weather:

A. H. Baumhover

	Mon.	Tues.	Wed	Thurs	Fri
High	86	82	80	87	85
Low	70	72	70	70	70

DEC 26 1951

UNITED STATES DEPARTMENT OF AGRICULTURE
 AGRICULTURAL RESEARCH ADMINISTRATION
 BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

Sanibel, Florida

12/22/51

To: R.C. Bughland, In Charge

From: A.H. Baumhover

Subject: Weekly Progress Report, 12/15-21/51

Egg masses collected during the week are listed below:

Date	12/15	16	17	18	19	20	21
Weather	88	66	69	78	77	80	82
in F.	70	52	56	65	62	64	71
Egg Masses--							
Knip Pen	F R	SNR	S R	SNR	SNR	FNR	F R 210 cpm
(Pen 1)				SNR			
				SNR			
Bush Pen		* F L	SNR		F L *		
(Pen 2)							
Eddy Pen	F R		F R	FNR	FNR	FNR	FNR
(Pen 3)	SNR		FNR	FNR	FNR		FNR
	S R		SNR	FNR	FNR		F R 130 cpm
				FNR	FNR		FNR
							F R 150 cpm
*radioactivity not checked							
				Current week	Cumulative	% of cumulative	
Total fertile egg masses				22	28	70	
Total sterile egg masses				10	12	30	
Total radioactive egg masses				8	10	26	
Total non-radioactive " "				22	28	74	

Since the ratio of emerged radioactive flies was 4 sterile to 1 fertile, or 80% sterile, and since the percentage of radioactive egg masses was 26% the effective total sterility of egg masses among the existing and released flies expected would be 80% of 26% or 21%. This is 9% below the actual sterility of 30%.

Weekly progress report, 12/15-21/51, Baumhover, p.2.

Mr. Eddy spent 2 evenings and a day with us during the week. He has suggested constructing a tent of mosquito netting near one of the pens to study the longevity of the released *C. americana*, as well as giving us a wealth of good advice.

Ticks on 1 dog and several of the government goats have been observed, as well as warbles in a tame rabbit. The ticks were particularly severe on the dog, with an area as large as one's hand spotted with sores and free of hair. All 3 situations would probably invite screw worm infestations.

Pupae shipped from Kerrville December 17 did not arrive in Ft. Meyers until December 19. However, significant emergence did not occur until December 21 and 22. We will check percentage of emergence as before.

Traps at Estero and Punta Rassa have been moved inland. St. James will be moved as soon as we are able to make one of the outboard motors run.

We are assuming that the flies for the egging colony are of the same stock as the released flies. Is that correct?.

Alfred H. Baumhover

3

JAN 2 1952

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
Sanibel, Florida

December 29, 1951

To: R.C. Bushland, In Charge

From: A.H. Baumhover

Subject: Weekly Progress Report 12/23-29/51

Data for the week follow:

Date	12/22	23	24	25	26	27	28
Temp. range	83	86	88	87	85	-	72
in F. degrees	72	63	70	70	-	70	54
Egg masses--							
Knip pen	FNR FNR	FNR	FNR FNR	F *	SNR FNR		F R FNR SNR FNR
Bush pen	FNR		FNR			FNR FNR	FNR
Eddy pen	FNR	FNR FNR FNR	FNR FNR	F * F * F * F*	FNR		FNR FNR FNR FNR

*Radioactivity not checked.

Emergence of both normal and sterilized flies, emerging December 21 thru 23, was only 28%. Our eggling colony, of the same origin as the released flies, had almost perished by December 26. Since they were held under similar conditions as previously existing colony I am at a loss to explain the mortality.

One small, green lizard was observed during the week feeding on adult screw worms as they rested in a tree. Since the lizards are plentiful they might well be an important factor in holding down the screw worm population.

cc: E.F. Knipling
G.W. Eddy

A.H. Baumhover

